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Place:
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INTRODUCTION

This booklet, prepared by the Office of Airports, is one of a series to be published by the Civil Aeronautics Administration on airport management, operation and maintenance. It is intended to aid airport owners and operators in establishing more efficient methods in the management of airports, and in placing this segment of the aviation industry, which is a comparatively new department of municipal government, on a sound economic basis.

Many of the management and operation methods discussed herein are based on specific and actual experiences which to a large extent have aided some airports to enjoy a successful as well as an economical operation.

As the majority of airports are owned and operated by municipalities, these booklets will deal primarily with publicly owned and operated airports. However, these booklets will serve a dual purpose because the recommendations, suggestions, and advice offered apply also to private and commercial airports.

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IMPORTANT NOTICE

In the exhibits contained herein the monetary values or numerical figures inserted do not and must not be construed to mean any sums, monetary values, or numerical figures recommended or advised for these items by the Civil Aeronautics Administration. They are inserted in these exhibits to better illustrate the mechanics involved in these particular airport management and maintenance problems.

Part I.—AIRPORT ACCOUNTING

Airports as Business Enterprises

Persons connected with the aviation industry are realizing that its success is more and more dependent on the efficient management and operation of the country's network of airports. In the part they play in this growing industry, airports are fast taking on the characteristics of complex business enterprises. No longer can they be regarded as a minor function carried on by a municipality or as the simple responsibility of an individual proprietor or operator.

All successful business enterprises are in continuous need of accurate and complete information about their financial condition and operation. This information is necessary to all phases of the management process, whether it is related to immediate or long-range problems and planning. It is an important factor in the matter of rate-setting for rendering various services and for budgeting; it is essential in planning for major purchases or improvements.

This greatly needed information can be obtained only through the means of accurately prepared financial statements. These statements must give a complete picture of the financial activity and condition of the enterprise in order to be helpful to persons interested in it.

Financial statements are no better than the records from which they are prepared. It is impossible to produce meaningful statements from accounting records that have not been purposely designed and maintained to furnish the kind of information most helpful to management.

All this is true of the modern airport.

Characteristics of Municipal Accounting

To get a clear picture of the municipal airport accounting problem it is necessary to understand some of the basic financial relationships between the airport and its owning municipality. This is important because these relationships have a bearing on the airport accounting program, and the fundamentals that underlie municipal finance and accounting differ a great deal from those of ordinary accounting for commercial purposes.

It is the usual practice in municipal accounting to set up and operate the records in the form of funds. A fund in municipal accounting is

a group of assets, property, or resources that are set aside or segregated for the purpose of performing a particular function, together with the accounting records pertinent to this function. A fund in this sense is not necessarily a fund of money, but may include all types of assets or properties and the accounting records necessary for the carrying out of a particular function.

Most municipalities operate with a maximum of about ten funds, with separate funds established and maintained for major functions. Included in this group of funds is one called the General Fund, which operates as a sort of "catch-all." Into the General Fund are placed all functions and activities of the municipality for which no special fund has been set up, together with the records of the financial operations of these functions. In this fund are found such functions as street maintenance and repair, the operation of city parks, public services, etc., and it is here that the operation of the airport is usually placed (fig. 1).

The purpose of municipal accounting is to account for the expenditure of public funds. At regular periods those persons responsible for keeping the records of all municipal activities must render an

Figure 1

General fund					Bond fund	Sinking fund	Working capital fund	Special assessment fund	Trust and agency fund	Utility fund
Streets	Parks	Public services	Airport	Etc.						

This is the usual group of funds maintained by the ordinary municipality. Each of these funds has its own assets and resources and is set up to perform a particular function. The accounting records of each fund are maintained as separate entities, and each fund issues monthly and annual financial statements independently of those of other funds.

accounting to the public of what use has been made of funds placed at their disposal. The revenue that flows into the General Fund comes from the collection of taxes, special assessments, and fees for services performed. In turn, disbursements are made from these revenues to pay for personal services, supplies and materials, contractual services, and equipment used to conduct the functions of the General Fund, such as streets, parks, hospitals, public services, public airports, etc. (fig. 2).

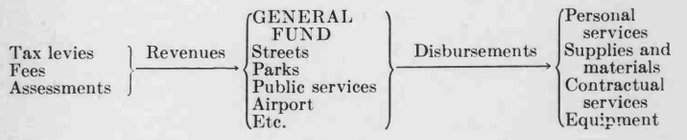
To record these financial transactions we find two basic forms in all municipal accounting systems. A Revenue Ledger is maintained to record the receipt of different kinds of revenue, such as tax collections, assessments, fines, or fees. This ledger is divided by vertical columns among the various funds of the municipality which receive revenue,

and thus provides the total of this particular type of revenue received by each fund (fig. 3).

The second basic form is an Appropriation Ledger. One of these is provided for each object of expenditure, such as personal services, for every fund and function of the municipality. This ledger has been designed to show at all times the amount of unencumbered or free balance remaining out of the original appropriation for the particular item being accounted for. Columns are provided in this ledger to record encumbrances of the fund as well as disbursements from the fund so that the unencumbered balance can be determined (fig. 4).

Except for minor refinements and a little more detail, most municipal airport accounting procedures are like these described. At the end of a fiscal period, the city accountant issues a statement as to the total

Figure 2



All revenues produced by the various functions are funneled into the General Fund. Here they are disbursed to meet the costs of performing these various functions.

*Figure 3**

ACCOUNT: Fees Collected — REVENUE LEDGER — FISCAL YEAR 19__

ACCOUNT NO.

Date	Item	Total	General fund	Trust and agency fund	Utility fund	Etc.
Jan. 1, 1948	Budget estimate	$45, 000	$15, 000	$5, 000	$25, 000	
Jan. 30	Airport operations	$500	$500			

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.

This is the usual type of record that is kept of municipal revenues collected in the form of fees. It will be noted that airport revenues are included with other General Fund revenue from fees, giving no indication as to the activity providing the revenue.

revenues received from the airport and the amount spent for personal services, supplies and materials, contractual services, and equipment for the airport. This fulfills the legal requirement of accounting for public funds for the airport.

However, in the case of the accounting performed for commercial organizations, the objective is to provide management with complete and accurate information of the financial activity of the business so

*Figure 4**

FUND: General — APPROPRIATION LEDGER — ACCOUNT NO.
FUNCTION: Airport — FISCAL YEAR 19__
OBJECT: Personal Services

Date	Item	Encumbrances			Expenditures	Unencumbered balance
		Paid	Issued	Balance		
Jan. 1, 19__	Budget appropriation					$10,000
Jan. 7	Pay roll		$150	$150		$9,850
8	"	$150			$150	$9,850

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.

Except for minor refinements this is the usual method used in municipal accounting to record disbursements. A similar ledger is provided for the airport for supplies and materials, contractual services, and equipment. From these records can be obtained only the annual totals in comparison with appropriation figures for these items, with no details available as to the nature of these expenditures.

that more efficient operation can be obtained in the form of lower costs and higher profits.

It is these two fundamental differences that the field of airport accounting is endeavoring to reconcile, by recognizing and providing for both the public and commercial aspects of the municipal airport.

Any change that might be suggested in the methods of performing airport accounting in a given municipality is logically met by resistance on the part of responsible local officials. This is because they are legally bound to maintain only such records as will render an accounting of the public funds in their hands. Furthermore they are frequently prevented from making any change by limited budgets, unqualified personnel and the established routines for performing such activities as ordering, purchasing, disbursing, etc.

All of these factors must be taken into consideration in discussing any new ideas in the field of airport accounting.

Removing the airport records from the General Fund is the major step in correcting the present condition of airport accounting. It is obvious that proper attention cannot be given to this function if its financial activities and records are mingled with the other functions of the General Fund. If such a situation seems practical, therefore, a separate fund, somewhat like the utility funds now in operation in many municipalities, can be suggested as the first step in overcoming the inadequacy of existing airport accounting techniques.

Subsidiary Accounts for the Airport

In most instances, however, it is not feasible to advocate removing the airport records from the General Fund and setting up a separate fund for the airport, as this is too great a step to be taken by the moderate-sized municipality. Instead a second-best method of performing airport accounting can be advocated, which will make use of the records in the General Fund by expanding and supplementing the information they contain.

Basically this can be done by establishing what is called a subsidiary or subordinate set of accounts for the airport. In general this procedure makes use of the information contained in the General Fund records and itemizes, expands, and classifies it in greater and more specific detail.

As has been pointed out, most General Fund accounting systems contain a Revenue Ledger and an Appropriation Ledger. Revenue of certain types, such as fees or assessments, are recorded into the Revenue Ledger by funds. Disbursements are recorded into the Appropriation Ledger by fund, by function, and by object. In each instance comparisons are made with budgetary amounts which have previously been established.

If a subsidiary set of accounts is set up it will be necessary to have some person responsible for these records, either at the airport or in the accounting department. This person must be notified in some manner of each and every transaction that occurs affecting the airport, whether it is a receipt or a disbursement. This procedure can be worked out differently at various municipalities, depending on the established routine for collecting and disbursing funds. For example, it might be accomplished by having the general accountant supply a periodic recapitulation, say each week, of all transactions that have occurred affecting the airport. This would be the source of information for all receipts and expenditures relative to the airport from which the airport bookkeeper can make the appropriate entries in his subsidiary set of accounts. On the other hand it might be possible

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*Figure 5**

RECAPITULATION OF AIRPORT TRANSACTIONS RECORDED IN THE GENERAL FUND

For Week Ended January 8, 19__

Date	Item	Amount			General fund account	Remarks	Appropriate airport account	Amount
		Encumbrances	Disbursements	Receipts				
Jan. 2	Airline collections			$200	Airport fees	Landing fees	Field-use charges	$200
3	Encumbrance No. 121	$50			Supplies and materials	Supplies ordered	Maintenance supplies	50
5	Encumbrance No. 122	$300			Equipment	Emergency lights	Operation equipment	300
6	Liquidation of encumbrance No. 121		$50					
8	Pay roll		$250		Personal services		Administrative salaries	65
							Maintenance salaries	135
							Operation salaries	50
		Prepared by General Fund Bookkeeper					*Prepared by Airport Bookkeeper*	

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.

to send the airport bookkeeper a duplicate copy of the forms used in receiving or disbursing airport funds, on which would be furnished the information necessary to record the particular transaction in the proper account. Whatever means of notification is used should endeavor to keep the airport bookkeeper accurately and currently informed as to the transactions occurring relative to the airport, as well as to assure an accurate tie-in with the records kept for the General Fund (fig. 5).

It is essential to better control of airport finances to know the breakdown of revenue by sources and activities. To do this it is suggested that the amounts entered into the Fees Collected Ledger in the General Fund for the airport be broken down into such activities as sale of aviation fuel and oil, field-use charges, ramp service, storage of planes, building rentals, ground-site rentals, concessions, management services, and management sales. An account for each of these activities would be set up in the subsidiary records and into each one would be placed the amount received by the airport in each classification by the airport bookkeeper. The total entered into all these revenue accounts would at all times equal the amount in the Fees Collected Ledger for the airport in the General Fund (fig. 6).

*Figure 6**

Information located in—	Under the title of—	In the amount of—
General fund revenue ledger	Fees collected	$5,000
Subsidiary airport accounts	Sale of aviation fuel and oil	$1,000
	Field-use charges	1,000
	Ramp services	1,000
	Storage of planes	100
	Building rentals	200
	Ground site rentals	50
	Concessions	1,550
	Management services	25
	Management sales	60
	Other	15
	TOTAL	$5,000

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.

The amount appearing in the General Fund Revenue Ledger for the period should be equal to the total amount recorded in the airport subsidiary accounts, which show the break-down of revenue.

An additional need in the control of airport financial activity is information as to the amount of cost required to perform different activities on the airport. For example, instead of learning the total

amount spent for personal services during a given period, it should be possible to find out the cost of personal services for administrative purposes as well as for maintenance and operation. The same thing is true of contractual services, supplies and materials, and other expenditures made for the airport. To provide this information, therefore, it is suggested that the total amount that is recorded each pay period, for example, be itemized on subsidiary airport accounts to indicate the amounts chargeable to administration, maintenance, and operation. In more elaborate operations it might be desirable to break this information down into greater detail, which could easily be done by the inclusion of more accounts in the airport records. However, the total of all these salary items would be equal to the

*Figure 7**

Information located in—	Under the title of—	In the amount of—
General fund appropriation ledger.	Airport personal services	$8,000
Subsidiary airport accounts	Administration salaries	$4,000
	Maintenance salaries and wages	2,500
	Operation salaries and wages	1,500
	TOTAL	8,000

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.

The amount appearing in the General Fund Appropriation Ledger for the period should be equal to the amount recorded in the airport subsidiary accounts, which show the break-down of expense.

amount recorded each pay period in the Personal Services account in the General Fund which would keep a continuous tie-in between the two sets of records (fig. 7).

By way of illustrating the means of notifying the airport bookkeeper of the occurrence of disbursement, let us suggest a few procedures for the handling of different kinds of disbursements. For example, the weekly pay-roll sheet, which forms the source of information as to the allocation of the total pay roll to various activities on the airport, can be made out by the airport bookkeeper. With this first-hand information the bookkeeper can enter the amounts directly in the proper accounts in the airport records before the approved pay roll is sent to the disbursing officer. This same procedure can be applied to the requisitioning of supplies and materials, whereby the airport bookkeeper can either originate or be given a copy of each requisition. This will furnish him with the information needed to

record each requisition of supplies to the appropriate expense account in the airport records. This same procedure may be followed in respect to other expense classifications so that the total amounts in the General Fund accounts for personal services, contractual services, supplies and materials, etc., will be itemized in the supporting subsidiary accounts kept for the airport.

The results of keeping this itemized break-down of airport transactions in subsidiary form will enable the airport bookkeeper to prepare a statement of income and expense which will furnish useful information to the airport management. In its simplest form it will reveal the relationship between expenses of maintenance, operation, and administration of the airport and its various facilities, with more complete information being provided if the records have been kept in more detailed fashion.

The procedure outlined above is the simplest and most inexpensive means of providing financial information about the airport. This type of procedure is recommended for smaller operations where activities are not extensive and the personnel set-up is limited. Other principles may be incorporated into the accounting picture in the event the size of the operation and the personnel factor warrant it.

Airport as a Separate Fund

If conditions within the municipality and at the airport justify it, a more elaborate accounting program can be designed for the airport. This should first involve the removal of the airport from the General Fund, as suggested earlier in this discussion, and establishing it as a separate fund. This process can take precedence from the various utility funds established and operated by municipalities for their water supply, power supply, etc., systems. In this manner the airport can be operated as either an ordinary separate fund or as a separate utility fund. As one of the latter, the airport will be subject to the same regulations as other utility operations. One of these regulations is the necessity of following commercial methods of accounting as much as possible, which the airport would be required to do if it were so classified.

Commercial methods of accounting would ultimately work to the benefit of the airport, however. As was stated early in this discussion, airports are rapidly acquiring the characteristics of business enterprises, and under these circumstances the principles of commercial accounting should be followed.

The break-down of revenue and expense accounts suggested in the first alternative in this discussion can serve as a framework around which to build a separate accounting system if the airport is operated

through its own fund, whether or not it is classified as a public utility. In the case of the expense accounts, however, the accounts can be further broken down to determine the cost of operating particular areas or facilities of the airport, or of conducting various activities. For example, it might be considered desirable to allocate the salaries and wages account among various areas of the airport, such as the landing area, hangar area, terminal area, or other areas, in which event subsidiary accounts will have to be set up for each of those items. The same break-down will have to be applied to other expense classifications so that the cost of operating them can be determined. This procedure is recommended, particularly for the larger airports.

This objective becomes the beginning of an airport cost accounting system, which is beyond the scope of this discussion. However, much valuable cost information can be derived by just following the suggestions made in the preceding paragraph.

In addition to supplying more detailed information relative to the operating costs of the airport, an airport operating as a separate fund should be placed on the accrual basis of accounting. Most businesses are conducted on the accrual basis, whereas municipal accounting is conducted on the cash basis of accounting. The essential difference between the two consists in maintaining a complete distinction between accounting for capital and revenue items. Under the cash basis of accounting, a transaction is not recognized until a transfer of cash takes place, at which time it is recorded. This means that no expense is recorded in the books until payment is actually made for the goods or services, and, in the same manner, a transaction is not recorded as revenue until payment is received for the goods or services. One result of operating on the cash basis is that the purchase of an item of equipment is recorded as an expense at the time payment is made. No consideration is given to the fact that such equipment may be used for several years in the operation of the airport. Instead, its purchase becomes an expense in the period in which it is paid for, and no further accounting is made of the item until it is disposed of. The same principle is true of supplies and materials; all supplies become an expense in the period they are paid for, and inventories of unused items are not recognized on the books.

Another result of operating on the cash basis occurs in the case of uncollected customer accounts, which are not recognized as airport revenue until this collection is made, even though the sale may have occurred sometime in the past.

The accrual basis of accounting makes provision for all of these situations. It operates on the principle that revenue is to be recorded in the period it is earned, rather than collected, and expenses are to

be recognized when they are incurred or used, rather than when paid for. This gives an entirely different picture of the operating revenues and costs for a given period than are obtained by maintaining the records on the cash basis. In the case of revenues, all amounts earned within a given period appear as revenue in the profit and loss statement for that period. This means that at the end of the year there will probably be some uncollected customers' accounts to be recognized which have resulted from earned revenue during the period just completed.

In the case of expenses, the use of the accrual basis will also make quite a difference in the operating results of the airport. All expenses incurred within a given year will appear in the profit and loss statement, whether or not they are paid for during that year. This may involve recognizing three different types of expenses; (1) those that were incurred in the current year and paid for in the current year, (2) those that were incurred in the current year but were paid for in previous years, and (3) those that were incurred in the current year but will be paid for in the coming year. The accrual basis of accounting makes provision for all three conditions.

It may appear at first glance that the accrual basis of accounting is an extremely complicated procedure. However, the actual recording of these noncash transactions, as they are often called, need not be done but once a year—at the time financial statements are being prepared. At this time an auditor can be engaged to make the necessary adjustments to the accounts to record these noncash items, which will place the airport on the accrual basis. If it is desired, the same type of adjustments could be made to the set of subsidiary accounts set up for the airport as described in the first part of this discussion. These adjustments could be made by an auditor in memorandum form (that is, on a worksheet which prepares information for the statements) so as not to disturb the tie-in between them and the General Fund accounts.

The financial statements produced by the methods of accounting suggested in this discussion correspond in form to those presented in the manual on Airport Financial Statements, which is one of a series issued by the Office of Airports of the Civil Aeronautics Administration. This manual presents a model airport Statement of Income and Expense and a Balance Sheet and describes in detail how to prepare them by means of worksheets and textual material from accounting records similar to those described in this discussion.

Part II.—AIRPORT BUDGETING

Preliminary Considerations

At least once every year the airport manager is confronted with the problem of preparing a budget for future operations, either for the remainder of the current year or for the entire coming year. This task poses quite a problem to him, inasmuch as the successful meeting of budget limitations and obligations plays an important role in the relations of the airport with the officials of its owning municipality.

Municipalities vary greatly in the manner in which they handle their procedures from the time preparation of the budget is initiated until it is enacted. For this reason any discussion of airport budgeting will have to be confined to generalities and principles.

In general, a budget is a plan or program of future financial activities. Budgets can be prepared for many reasons and to serve many purposes. This discussion will be limited to the preparation of the budget to be presented each year to the city legislative body for the enactment of an annual appropriation for airport operations. A few assumptions as to circumstances will have to be made before this discussion can be developed. Let us make our assumptions fit the average airport. This means that the airport is municipally owned and operated, that it has not reached that point in its development where its annual receipts are equal to its annual disbursements, and that its operations and personnel set-up are not large enough to justify removing the airport from the General Fund so far as its financial operations are concerned. It follows, therefore, that this airport is fairly dependent on the municipality for its current operating funds, and it is closely tied in with the General Fund for accounting and budgetary purposes.

Sometime before the end of each fiscal year the airport manager will be directed by the appropriate authority to prepare estimates of the coming year's anticipated expenditures and how he plans to meet them, which will form a part of the budget for the General Fund. It will be necessary for him to project the amount of revenue expected from the coming year's operation of the airport, as well as the amounts he plans to spend for its operation and maintenance. Although he will not be required to furnish an itemized break-down

of the sources of airport revenue, he will be asked to estimate his expenditures in relation to the classification of accounts used in the General Fund. In most municipalities these will consist of personal services, supplies and materials, contractual services, fixed charges, capital improvements, and new equipment.

Use of Accounting Records in Preparation of Budget

The most helpful source of information at budget preparation time is a record of previous years' financial experiences. On the basis of past operations it is possible to estimate the coming year's revenue and to anticipate the cost of operating and maintaining the airport. The value of past years' accounting records is brought out at the time when information is needed for budgetary purposes, and the airport manager should learn to rely on these records as his prime source of information. An intelligent use of the accounting records from year to year in preparing budget estimates will enhance their value to the manager and will point out needed changes in handling the records to increase their usefulness.

By referring back to Part I of this pamphlet it will be recalled that a distinction was made between the accrual and cash basis of accounting, and it was pointed out that the basis used will materially affect the amount of revenue and expense determined in the operation of the airport. It should be clearly understood that municipal accounting in general uses the cash basis, and it is on this basis that all budgetary estimates are prepared, enacted, and appropriated. It is important, therefore, to realize that if adjustments have been made to the airport set of accounts to put it on the accrual basis at the time financial statements are prepared, those figures showing in the accounts before adjustments should be used as the basis of budgetary estimates.

Preparation of Work Program and Budget

The first step in preparing the budget is for the manager to prepare a work program for the coming year. On the basis of operational reports of previous years' activities the manager is able to anticipate the amount of activity in each of his revenue-producing activities. He should list all sources of revenue in the same manner as they are recorded in the suggested revenue accounts in Part I of this discussion i. e., sale of aviation fuel and oil, field-use charges, ramp service, storage of planes, building rentals, ground-site rentals, concessions, management services and sales, and other revenues. In each category on the basis of past experience will be listed the number of anticipated units, i. e., gallons sold, square feet occupied, etc., as well as the unit charge for each. By extending these amounts he will arrive at the

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estimated revenue by sources, the total of which will be the airport's estimated revenue (fig. 8).

*Figure 8**

CITY OF SMITHVILLE
AIRPORT DEPARTMENT

Revenue Worksheet
For Fiscal Year 19—

Source of revenue	*Explanation*	*Amount*
AVIATION ACTIVITIES		
Sale of aviation gas and oil	(Airport inventory and equipment—See expenditure worksheet, gross profit)	†$29, 244. 00
Field use charges:		
Scheduled air carriers	(See contract)	2, 400. 00
Nonscheduled air carriers	(See rate schedule)	3, 900. 00
Others	(See rate schedule)	1, 000. 00
TOTAL FIELD USE CHARGES		$7, 300. 00
Ramp service (labor):		
Servicing airlines and U. S. Government aircraft with airline and Government-owned gasoline and oil.	(See contract @ —¢ per gal.).	$17, 480. 00
Storage of planes:		
Individual hangars		$2, 520. 00
City owned and operated hangars	(Transient)	11, 240. 00
TOTAL STORAGE OF PLANES		$13, 760. 00
Building rentals:		
Commercial hangar No. 1	(See lease)	$3, 000. 00
Commercial hangar No. 2	(Lease unexpired)	3, 600. 00
Commercial hangar No. 3	(Lease renewed)	1, 800. 00
Airline offices—ticket counters and storage space.	(See contracts)	5, 200. 00
Business offices—administration building.	(See leases)	2, 960. 00
Government offices	(See contracts)	1, 080. 00
TOTAL BUILDING RENTALS		17, 640. 00

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.

†This is gross revenue prior to deducting operating and maintenance expenses, depreciation, and reserves for inventory loss. These can be regarded as amounting to roughly between 75 and 85 percent.

Figure 8 (Cont.)

Source of revenue	*Explanation*	*Amount*
Ground site rentals:		
XYZ Aircraft Mfg. Co	(See lease)	$5, 000. 00
BJD Aircraft Repair Co	(See lease)	300. 00
TOTAL GROUND SITE RENTALS		$5, 300. 00
TOTAL AVIATION ACTIVITIES		$90, 724. 00
ANCILLARY ACTIVITIES		
Concessions:		
Restaurant	(See contract and lease)	$6, 000. 00
Vending machines	(See contract)	1, 750. 00
Pay toilets	(See contract)	1, 200. 00
Telephone and telegraph	(See contract)	1, 650. 00
Auto filling station	(See contract)	4, 000. 00
Auto parking lot	(See contract for percent of gross).	6, 000. 00
TOTAL CONCESSIONS		$20, 600. 00
Management sales and services:		
Gross profit on resale of utilities	(See expenditure worksheet.)	$1, 005. 00
Rental of land for agricultural purposes.	— A. @ $____ per A	1, 932. 00
TOTAL MANAGEMENT SALES AND SERVICES.		$2, 937. 00
TOTAL ANCILLARY ACTIVITIES		23, 537. 00
TOTAL ESTIMATED AIRPORT REVENUES FOR FISCAL YEAR 19____.		$114, 261. 00
* * * *		
TOTAL ESTIMATED OPERATION AND MAINTENANCE EXPENSES.		$58, 415. 00
TOTAL DEFERRED MAINTENANCE AND DEPRECIATION		55, 000. 00
		$113, 415. 00
TOTAL ESTIMATED NET INCOME.		$846. 00

The next step is to apply the projected work program to the matter of cost and expense. It is essential that this part of the program be set up in keeping with expense classifications used in the General Fund records as was previously noted. This means that budget

estimates in final form will be classified as to the amount of anticipated expenditures for personal services, supplies and materials, contractual services, fixed charges, and capital improvements and new equipment. If the accounting procedures suggested in Part I are in use, whereby each of these expense classifications is broken down into greater detail, it will be necessary to use the totals of each group to arrive at the amount spent for the classifications making up the budget. These totals can be obtained from the previous year's Appropriation Ledger or by totaling each group in the airport subsidiary records. The subsidiary records can be very useful in analyzing the details of these expenditures, in recommending increases or decreases within certain groups, and in the over-all justification process (fig. 9).

*Figure 9**

CITY OF SMITHVILLE
AIRPORT DEPARTMENT
Expenditure Worksheet
For Fiscal Year 19—

	Kind of expenditure	*Explanation*	*Amount*
(1)	Personal services:		
(2)	Airport manager		$5, 200. 00
(3)	Assistant manager		3, 000. 00
(4)	Secretary-stenographer		2, 000. 00
(5)	Attendants—foremen	__ @ $_____ each	4, 000. 00
(6)	Attendants—helpers	__ @ $_____ each	11, 000. 00
(7)	Field maintenance attendant		1, 500. 00
(8)	Administration building janitors.	__ @ $_____ each	6, 000. 00
(9)	Miscellaneous wages and labor	(estimated)	10, 000. 00
(10)	TOTAL PERSONAL SERVICES		$42, 700. 00
(11)	Supplies and materials:		
(12)	Materials—field and building		$10, 000. 00
(13)	Supplies—field, building, and office.		2, 000. 00
(14)	Coal	Heat administration building and city-operated hangar.	250. 00
(15)	Gasoline and oil	Management motorized equipment.	208. 00
(16)	TOTAL SUPPLIES AND MATERIALS		$12, 458. 00

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.

(Fig. 9—Cont'd.)

	Kind of expenditure	*Explanation*	*Amount*
(17)	Contractual services:		
(18)	Electric power	Management use __¢ kw.-hr.	$200. 00
(19)	Water supply	Management use __¢ per M gal.	15. 00
(20)	Telephone	Management use OB, long distance.	240. 00
(21)	Intercommunication system	__ units	108. 00
(22)	Travel	Manager and advisory commission.	1, 300. 00
(23)	Auto allowance	Manager's personal automobile.	180. 00
(24)	TOTAL CONTRACTUAL SERVICES		$2, 043. 00
(25)	Fixed charges:		
(26)	Insurance	Liability and property damage—field.	$225. 00
(27)	Insurance	Liability and property damage—city hangar.	428. 00
(28)	Insurance	Comprehensive coverage—all city buildings.	556. 00
(29)	Bond premium	Airport manager	5. 00
(30)	TOTAL FIXED CHARGES		$1, 214. 00
(31)	Capital improvements and new equipment:		
(32)	Individual hangars	__ units and necessary taxi-strips.	$28, 000. 00
(33)	Taxi-strips	_____ sq. yds. east-west runway.	20, 000. 00
(34)	Addition to concrete apron	Administration building	48, 000. 00
(35)	Electric drinking fountain	Waiting room—administration building.	180. 00
(36)	Tractor and mowing attachments.	Field maintenance	1, 660. 00
(37)	TOTAL CAPITAL IMPROVEMENTS AND NEW EQUIPMENT.		$97, 840. 00
(38)	Deferred maintenance and depreciation.	Runways, buildings, equipment.	55, 000. 00
(39)	TOTAL EXPENDITURES, FISCAL YEAR 19—.		$211, 255. 00

(Fig. 9—Cont'd.)

	Kind of expenditure	*Explanation*	*Amount*
(40)	Merchandise and utilities for resale (revolving fund):		
(41)	Gasoline, 80-octane	——— gals. @ —¢ (cost)	$48, 000. 00
(42)	Gasoline, 91-octane	——— gals. @ —¢ (cost)	25, 500. 00
(43)	Aviation oil, standard grade	——— gals. @ —¢ (cost)	1, 320. 00
(44)	Aviation oil, premium grade	——— gals. @ —¢ (cost)	924. 00
(45)	TOTAL COST OF GASOLINE AND OIL.		$75, 744. 00
	These costs will be recovered from the sale of gasoline and oil as follows:		
	Gasoline, 80-octane	——— gals. @ —¢ (cost plus profit).	$66, 000. 00
	Gasoline, 91-octane	——— gals. @ —¢ (cost plus profit).	34, 500. 00
	Aviation oil, standard grade	——— gals. @ —¢ (cost plus profit).	2, 640. 00
	Aviation oil, premium grade	——— gals. @ —¢ (cost plus profit).	1, 848. 00
	TOTAL REVENUE ON SALE OF GASOLINE AND OIL.		$104, 988. 00
	Gross profit on sale of gasoline and oil.		$29, 244. 00
	Cost of utilities purchased for resale:		
(46)	Electric power	——— kw.-hr. @ —¢	$480. 00
(47)	Water supply	——— gals. @ —¢ per M	45. 00
(48)	TOTAL COST OF UTILITIES FOR RESALE.		$525. 00
	These costs will be recovered from the sale of utilities as follows:		
	Electric power	——— kw.-hr @ —¢	$1, 440. 00
	Water supply	——— gals. @ —¢ per M	90. 00
	TOTAL REVENUE FROM SALE OF UTILITIES.		$1, 530. 00
	Gross profit on sale of utilities		$1, 005. 00

It should be kept in mind that in most instances the allocation of amounts to individual items included in the functions of operating the airport is not set by the legal appropriation. Within limits it is possible for the airport manager to shift funds within functional classifications from one expense item to another if the need arises and the amounts are not too great. However, in the case of expenditures for equipment items and capital improvements, strict adherence to the original budget plan is enforced in most municipalities, so it behooves the airport management to give considerable thought to planning for these items. For the best advantage of the airport such anticipated expenditures as purchases of major items of equipment, or performing major repair or maintenance jobs, need careful planning and thought in order to comply with budget requirements once they are enacted for a given year.

Inasmuch as it has been emphasized that this budgetary procedure operates on the cash basis entirely, it should be noted that deferred items are not to be considered in this budget unless the particular municipality permits the setting aside of funds from year to year for this purpose. Even though these items, as well as many other items recognized in accrual accounting, are considered as airport expenses, they will have no part in the preparation of the budget unless actual funds are to be set aside from the current appropriation to meet them.

It should be brought out that in many instances the airport serves as a retailer of commodities to consumers, such as in the case of the sale of aviation fuel and oil. This means that it will be necessary for the management to purchase these items ahead of the time of sale and retain them in the form of inventory. The amounts needed for these purchases will appear as a sizable item in the year's budget, and the airport manager may experience difficulty in justifying and explaining these items to city officials.

To assist him in this process, it is suggested that this portion of the budget be drawn up listing those items purchased for resale separately from the purchase of other commodities or services. Along with the cost of purchasing these items should be placed the anticipated revenue from their sale in such a manner as to indicate the estimated selling profit from them. The only outlay from city funds will be for the purchase of the original inventory, which will be recovered from its sale. These funds will then be used to purchase more merchandise, which in turn will be sold. In many instances cities establish revolving funds for this type of transaction, keeping these funds separate from other funds, so that all receipts from sales are funneled into this fund to be used to purchase more goods for sale. Emphasis should be placed on this relationship to bring out the fact

that these items are not to be considered as part of the cost of operating the airport so that they will not be the source of concern to the body reviewing the proposed budget.

Justification of the Budget

All items of expenditure in the budget must be fully justified before the city's legislative body. Justification is an easy matter when figures of past years' operation of the airport can be used to point out the cost of successfully and adequately performing a given function. Here again the accounting system plays an important part.

In addition to the information from the accounting records, consideration should be given to the expected increase or decrease in specific activities on the airport. These will in great measure affect the figures for prior years' operations both in respect to revenues and expenditures. Increased activity should be wisely, and conservatively used as a justification to increase either the revenues or expenditures, and only reliable and authenticated bases for making such estimates should be used. Recognition should be made of changing price levels, anticipated salary changes, and personnel needs. In all instances salary figures should coincide with the schedule of rates used for corresponding positions in other city departments, and the airport manager should familiarize himself with these amounts.

Intelligently presented justifications can go a long way toward educating city officials and legislative bodies in the financial characteristics of airports. On the basis of adequately prepared justifications often rests the success of obtaining needed funds for airport operation and improvement (fig. 10).

*Figure 10**

CITY OF SMITHVILLE
AIRPORT DEPARTMENT
Justification Sheet for the Budget
Year 19__

ITEM 1 *Personal services.* Items hereunder listed are necessary for the proper management, maintenance, and operation of the airport.

ITEM 2 *Airport manager.* It will be noted that the salary of $_____ per year recommended indicates a $____ per month increase over the previous year. We feel that this increase is justified by the following: First, the airport has shown definite progress and good growth over the preceding year; second, the airport is being operated and managed in a safe and sane manner, no personal injuries or fatalities for the past five years; third, annual report for the year 19__ will show a maintenance and operation profit of better than $_____. We feel the three above desirable results were obtained directly by good, efficient airport management, which respresent business ability, sales ability, and strict attention to duty to achieve these results; therefore, it is our recommendation that this increase be allowed.

ITEM 3 *Assistant manager.* This item is carried the same as the year 19__. We feel that the amount is justifiable as is.

ITEM 4 *Secretary-stenographer.* This item shows an increase of $____ per month over the previous year. We feel that this increase is justifiable due to the increase of airport business thereby increasing proportionately the duties of this office. Increase recommended.

ITEM 5 *Attendants—foremen.* Same as year 19__. Amount justifiable and recommended.

ITEM 6 *Attendants—helpers* (8 in number). Increase of two (2) over previous year. These additional two helpers are recommended and will be justifiable by reason of the additional four (4) night airline schedules and a noticeable increase in night transient aircraft to be serviced. Recommended and justifiable.

ITEM 7 *Field maintenance attendant.* Same as year 19__. Although the duties of this attendant have increased materially, it is felt that the airport attendant helpers, Item 6, can render additional help necessary to this field maintenance when justifiable. Justifiable and recommended.

ITEM 8 *Administration building janitors* (4 in number). Same as year 19__. Justifiable and recommended.

ITEM 9 *Miscellaneous wages and labor.* This is an estimated amount necessary to pay other city department personnel when doing work for the airport. Also included in this item is vacation-leave personnel and extra part-time help for the airport, if and when needed. Justifiable and recommended.

ITEM 10 Shows the total amount of the above items. Justifiable and recommended.

ITEM 11 *Supplies and materials.* Expendable items necessary for the proper operation of the airport for the fiscal year.

ITEM 12 *Materials—field and building.* This item includes crushed stone, asphalt, and other necessary materials for hard surface runways maintenance, and for building paint and other necessary building material. This item shows $_____ increase over previous year, due to the need for additional maintenance necessary to hard surface runways and taxi strips brought on by unfavorable weather conditions, and Hangar No. 1 needing repainting to eliminate excessive weathering. Consultants to justify this increase were the City Engineer and City Building Inspector, who approved this item.

ITEM 13 *Supplies—field, building, and office.* This item covers all supplies for the field such as picks, shovels, field lights, etc.; building—brooms, brushes, soap, toilet paper, light bulbs, sweeping compound, etc.; office—stationery, ink, sales slip books, pencils, etc. Under office supplies this item shows an increase from the previous year of $_____ justified by the fact that a new supply of _____ sales slips in pad form will have to be ordered. Supply on hand exhausted by May 1st.

ITEM 14 *Coal* (heat administration building and city-operated hangar). This item same as preceding year. Satisfactory, justifiable, and recommended.

ITEM 15 *Gasoline and oil.* Airport management's motorized equipment. Fire and crash truck, tractor, mowing machine, dump trucks, scooter, etc. Necessary non-highway, non-State taxable fuel required to properly operate,

*The items listed herein correspond to those shown in Figure 9.

manage, and maintain the airport for the fiscal year. Same as previous year. Sufficient, justifiable, and recommended.

NOTE: A savings in this item recommended by the airport manager that the old buried tanks used by former contractors be used for the storage of this fuel instead of service trucks bringing it to the airport as and when needed.

ITEM 16 Shows the total amount of the above items. Justifiable and recommended.

ITEM 17 *Contractual services.* All services for which payment is made other than on a pay roll.

ITEM 18 *Electric power* (management use). This item includes all the necessary electric power for field lights, administration building lights, and hangar owned and operated by city for management's exclusive proportionate use from master meter readings. This item shows a slight increase over the previous year, justified by increased night use of field lights. Consultant for this increase: City Electrical Engineer. Justifiable and recommended.

ITEM 19 *Water supply* (management use). Administration building and lawn, city-owned hangar, fire plugs, etc. Same as last year. Satisfactory, justifiable, and recommended.

ITEM 20 *Telephone* (management use). One complete unit for airport manager's office, one unit for operations office, one unit for city-owned hangar. Official business, long-distance calls estimated. Same as previous year. Satisfactory, justifiable, and recommended.

ITEM 21 *Intercommunication system.* Two units for airport management's exclusive use. One in airport manager's office and one in operations office. This unit was installed and rented from the local telephone company; each unit prorated in proportionate part.

NOTE: It is believed that the airport management should buy and install, own and operate the equipment, and in this manner the cost per unit charged can greatly be reduced. A study of this is requested by the Airport Advisory Committee.

ITEM 22 *Travel* (manager and Advisory Commission). For the manager and the Advisory Commission incurred expense necessary to travel on official city airport business. Refundable to the above parties; must be made in an itemized statement to the City Auditor and approved by the City Manager, before payment. Justifiable and recommended.

ITEM 23 *Auto allowance.* City's use of manager's automobile. This item same as previous year. Sufficient, justifiable, and recommended.

NOTE: The airport's use of the manager's car at the present time does not justify the purchase of a car for this purpose.

ITEM 24 Shows the total amount of the above items. Justifiable and recommended.

ITEM 25 *Fixed charges.* Items which do not vary with the amount of airport activity.

ITEM 26 *Insurance* (liability and property damage—field). This item shows a reduction of $——— per year. This reduction due to no claims filed for the past 8 years.

ITEM 27 *Insurance* (liability and property damage—city hangar). This item carries a $____ increase from previous year, due to the $____ deductible damage clause being reduced to $____ deductible. This increase and change is recommended due to the over-crowding of this hangar and even with the most careful care by attendants, damage is bound to result. Justifiable and recommended.

ITEM 28 *Insurance* (comprehensive coverage—all city buildings). Fire, windstorm, etc. Same as previous year. Sufficient, justifiable, and recommended.

NOTE: It is recommended that the Airport Advisory Committee study the possibilities of including the airport buildings under the city's master comprehensive coverage policy for all city-owned buildings. It is believed that if this policy is included in the city's master policy, a reduction can be effected.

ITEM 29 *Bond premium* (airport manager). State law requires all public servants handling public funds be bonded. Same as previous year. Sufficient, justifiable, and recommended.

ITEM 30 Shows the total amount of the above items. Justifiable and recommended.

ITEM 31 *Capital improvements and new equipment.* All items of a permanent nature to be used by the airport in its operations.

ITEM 32 *Individual hangars.* Increased activity at airport justifies construction of ———— (——) individual hangars for storage of locally based planes. Increase in storage revenue is based on construction of new hangars. Justifiable and recommended.

ITEM 33 *Taxi-strip.* Essential because of increased number of operations and airline schedules for the coming year. Justifiable and recommended.

ITEM 34 *Addition to concrete apron.* Additional airline schedules make present loading apron inadequate. This addition needed to administration building apron to take care of added traffic. Justifiable and recommended.

ITEM 35 *Electric drinking fountain.* Needed in the waiting room of the administration building for the convenience of passengers as no provision is now made. Justifiable and recommended.

ITEM 36 *Tractor and complete mowing attachments.* Activities at the field have reached the point where frequent mowing of the landing area is essential. Airport has had to supplement its present inadequate equipment by borrowing frequently from other city departments. Justifiable and recommended.

ITEM 37 Shows the total amount of the above items. Justifiable and recommended.

ITEM 38 *Deferred maintenance and depreciation.* This item of expenditure includes deferred maintenance, replacement or amortization on all runways, taxi-strips, aprons, buildings, and equipment at the following rates:

Runways and taxi-strips (asphalt):

Reseal every	5 years
1-inch plant mix every	10 years
Concrete aprons replaced	50 years
Administration building amortized in	40 years
Hangars amortized in	30 years
Other temporary buildings amortized in	10 years
Equipment	7 years

ITEM 39 *Total expenditures for operation and maintenance.* The full operating and maintenance cost for the fiscal year 19__ is self-explanatory.

ITEM 40 *Merchandise and utilities for resale.* This item carries an estimated amount necessary for the purchase at the city's cost price of merchandise

and utilities that the airport intends to resell at a reasonable profit to the various airport consumers. The amount of profit carried by these items is sufficient to offset the incurred airport expense.

ITEM 41 *Gasoline* (80-octane). This total number of gallons was based on last year's total sales plus ____% increase. Warranted by more planes based on the airport and an expected increase in transient planes. Justifiable and recommended.

ITEM 42 *Gasoline* (91-octane). This total number of gallons was based on last year's total sales plus ____% increase. Warranted by more planes using this type of fuel released by the Government for civilian operators. Justifiable and recommended.

ITEM 43 *Aviation oil* (standard grade). This total number of gallons was based on last year's sales plus ____% increase. Justifiable and recommended.

ITEM 44 *Aviation oil* (premium grade). This total number of gallons was based on last year's sales plus ____% increase. Justifiable and recommended.

ITEM 45 Shows the total amount of the above items. It is to be understood that this does not represent an outlay by the city for the amounts inasmuch as these items are meant for resale, and revenues will more than pay for their cost. The only outlay by the city will be for the original inventory, which will be recovered from its sale. This in turn will be used to purchase another inventory for future sale. Justifiable and recommended.

ITEM 46 *Electric power*. Total kw.-hr. based amount used last year. Sufficient, justifiable, and recommended.

ITEM 47 *Water supply*. Total gallons based on amount used last year. Sufficient, justifiable, and recommended.

ITEM 48 See Item 45.

Miscellaneous Budgetary Considerations

In many instances airports will be unable to rely on their own experience for help in preparing their budgets, either because adequate accounting records have not been kept or because it is their first or second year of operation. In this event, revenues will have to be approximated on the basis of the known amount of activity on the airport for the coming year, plus additions for that portion of the activity which cannot be estimated. It may be possible to collect some information on this matter from neighboring airports of similar size and conditions or through conference with advisory officials of the Civil Aeronautics Administration.

Costs can be more accurately estimated by comparison with other city functions. It will be possible to determine the rates of pay in force through the city for various classes of positions as well as to estimate the cost of performing certain routine functions on the airport that are common to other departments.

Some cities merely act as landlords to their particular airports, leasing its operation to a private concern. In these cases the municipality's airport revenue consists of rent from the operator and its expense may be no more than the cost of landlord maintenance.

Budgeting in these instances is an extremely simple process and scarcely warrants any more than passing reference. The principles pointed out in the circumstances above can be scaled down to meet this type of operation.

Presentation of Budget Summary

Based on the above information and considerations from the work programs and justifications, a Budget Summary is prepared to summarize and compare estimated revenues and expenditures. The Budget Summary is the form used to present budget information to the legislative body for consideration and enactment. If a deficit is predicted on the Budget Summary, the appropriate legislative body will use this information as the basis on which to make an appropriation from the city's General Fund to underwrite the deficit from operating the airport (fig. 11).

*Figure 11**

CITY OF SMITHVILLE
AIRPORT DEPARTMENT

Budget Summary
For Fiscal Year 19—

Estimated Revenues		Estimated Expenditures	
Sale of aviation gasoline and oil (gross profit)	$29, 244. 00	Personal services	$42, 700. 00
Field use charges	7, 300. 00	Supplies and materials	12, 458. 00
Ramp service	17, 480. 00	Contractual services	2, 043. 00
Storage of planes	13, 760. 00	Fixed charges	1, 214. 00
Building rentals	17, 640. 00	Reserve fund (deferred maintenance depreciation)	55, 000. 00
Ground site rentals	5, 300. 00		
Concessions	20, 600. 00		
Management sales and services	2, 937. 00	Total Maintenance and Operation	$113, 415. 00
Total	$114, 261. 00		
Deficit—from general fund	$97, 004. 00	Capital improvements and equipment	$97, 840. 00
Total	$211, 265. 00	Total Budget Request	$211, 265. 00

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.

Usual form of Budget Summary presented by Airport Department to Chief Budget Officer.

Operation of the Budget

Once the budget is enacted and funds appropriated, the management should be kept well-informed throughout the year as to the

relationship between budgeted amounts, actual receipts, and expenditures, and remaining balances. This can be done by issuing periodic statements comparing the amounts of actual receipts and disbursements with the appropriations established at the beginning of the year. Reasons for any discrepancies can be detected through the airport subsidiary accounting records. This will increase the value of the accounting system to the manager by keeping him constantly informed as to his adherence to the established financial plan. Through its information he can determine which expenditures are running too high in comparison to his budget and which revenues are not up to expectations (figs. 12 and 13).

*Figure 12**

CITY OF SMITHVILLE
AIRPORT DEPARTMENT

Comparison of Expenditures and Encumbrances with Appropriation Three Months Ended March 31, 19—

Item	Total appropriation	Total to date			Unexpended balance	Encumbrances	Unencumbered balance
		Estimated	Actual	Excess of estimate over actual or vice versa†			
Personal services:							
Airport manager	$5, 200	$1, 300	$1, 300	----------	$3, 900	------	$3, 900
Assistant manager	3, 000	750	750	----------	2, 250	------	2, 250
Secretary-stenographer	2, 000	500	400	$100	1, 600	------	1, 600
Etc.							

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.
†Indicates a negative amount.

A statement which provides management with a continuous means of comparing actual expenditures with appropriations.

The practice of attempting to "use up" or spend any balance remaining in the appropriation for any particular item by means of large expenditures before the year is over should be discouraged. Any portion of the appropriation remaining near the close of the year should be turned back to the General Fund without making large expenditures to use it up. This condition can be prevented through more careful budget preparation before the year starts by making use of the information gained from previous years' records.

As has been frequently pointed out, the manager's successful following of the budget plan wins good will for him and the airport among the various interested city officials as well as the public. In many instances the budgetary relationship between the airport and its city is the only tangible tie-in between airport management and the city

*Figure 13**

CITY OF SMITHVILLE AIRPORT DEPARTMENT

Comparison of Estimated With Actual Revenues Three Months Ended March 31, 19—

Item	Total estimated	Total to date		
		Estimated	Actual	Over or under* estimate
Sale of aviation fuel and oil	$104, 988	$26, 247	$27, 500	$1, 253
Field-use charges	$7, 300	$1, 825	$1, 975	$150
Ramp service	$17, 480	$4, 370	$4, 210	†$160
Etc.				

*Monetary values and numerical figures as used in this exhibit are for illustrative purposes only.
†A negative amount.

A statement which provides management with a continuous means of comparing actual revenues with budgetary estimates.

government, and it is through this channel that the city gains its impressions of the airport management. By realizing the importance of this relationship and making every effort to abide by the official financial program, as set forth by the budget, the manager of the airport can greatly enhance the status of his public relations.

Part III.—AIRPORT INSURANCE

The matter of insurance at airports presents a major problem to the management inasmuch as its cost is often a large item in the airport budget. Under ordinary circumstances, the cost of insurance is a fixed amount from year to year, which does not vary with the amount of activity at a given airport.

Not only in the matter of cost, but in many other management policies, does insurance play an important part. Various types of liabilities, which are peculiar to airports, must be provided for, as well as losses to property due to fire and natural causes. In addition, the bonding of certain employees must be included in considering the matter of insurance, so it can be seen that insurance programs at airports can be quite complex and present unusual problems.

It might be well to discuss a few factors relative to the major kinds of insurance carried by airports before setting up some general recommendations in the field. It must be kept in mind, however, that in the matter of insurance, especially with reference to liability insurance, individual State laws and court decisions vary a good deal. Inasmuch as this is the case, it will be emphasized throughout this discussion that it is up to the airport manager to investigate the situation relative to insurance within his individual State for final rulings on particular situations.

Insurance for Losses from Fire and Other Causes

Insurance carried for the protection against loss due to property damage from fire and other causes is one of the most important kinds in the insurance program of an airport. Insurance of this type can be handled in many ways—through a stock or mutual company, State insurance funds, self insurance, or no insurance at all. The decision as to how insurance shall be carried is up to the municipality or a ruling of the State itself, although the airport manager can suggest or advise that certain practices be followed.

First will be presented some general means of reducing the cost of this insurance, regardless of the manner in which it is carried.

It is an excellent idea for the airport to instigate the use of individual insurance records for each of its insurable buildings or facilities. These records might well be coordinated with individual cost and depreciation records that are kept for accounting purposes, thus tying-in the accounting procedures used for these properties with their insurance records. This record should include, among other items, the value of the building and its contents and a complete description of the insurance policies covering it, as well as losses paid by the policy (fig. 14).

Figure 14

INSURANCE RECORD FORM

Policy Data		Property Data	
Policy Number		Type or name of property	
Company		Location of property	
Agent		Cost of property	$
Type of insurance		Date of acquisition	
Date of issue		Annual depreciation	$
Term of policy		Assessed value of property	$
Total premium for period	$	Total insurance carried	$
Less: dividends or refunds	$	Other policy Nos	
Net premium for period	$	Contents:	
Losses paid during period	$	Type of inventory	
Date canceled ____, suspended ____		Date of last inventory	
Expired ____		Amount of last inventory	$

This form suggests the kind of information that should be kept relative to all types of insurance coverage at airports.

Frequent appraisals should be made of the insured property to keep the insured value in line with actual conditions. In general, the insured value of a facility should be equal to its replacement value less noninsurable items, less depreciation to date.

The elimination of fire hazards will go a long way toward reducing the cost of insurance. Items which contribute to fire hazards can be further reduced through the installation of sprinkler systems, fire extinguishers, and equipment. To assist in the elimination of fire hazards it is well to have the airport subject to frequent inspections by the local fire chief. The fire chief should have the authority to enforce conformity with both local standards and those of the National Board of Fire Underwriters. Final authority in any controversial matter in this respect should lie in the local fire chief. The fire chief should make inspections of the airport property without prior notice to the airport personnel.

Many airports reduce their over-all insurance cost by carrying what is known as co-insurance. This means that the airport agrees to insure the facility for, say, 90 percent of its insurable value and share whatever loss occurs on a 90–10 basis with the insurance company.

This type of insurance is based on the principle that most fires cause only a partial rather than a total loss of a given facility. Such a program often brings about reduced rates.

A reduction in insurance costs can often be effected by taking a policy on the basis of 3- or 5-year term, rather than for 1 year. In ordinary municipal accounting this method of paying for insurance will cause inequalities in the cost of operating the airport from year to year, inasmuch as the cost of the entire premium will be charged against the year it is paid for. Under the accrual basis of accounting (see Part I) an expense of this type would be prorated over the 3 or 5 years to which it applies, thus equalizing the cost.

An extremely important matter to remember in planning the insurance program is to consider the idea of combining the airport's fire and extended-coverage insurance with the over-all program of the municipality. In this manner a blanket policy can be written for all city facilities, which brings about a reduction in rate by eliminating coverage from unimportant combustible buildings.

Cities in general and airports in particular can go a long way toward justifying rate reductions by keeping a long-term record of their insurance costs and losses. It is frequently the case that, over a 10-year period, for example, the amounts paid in the form of premiums are many times greater than the amount claimed for loss over this period. Because of this fact, which can be brought out by means of a careful record, it is possible for cities and airports to be placed in a preferential class of insurable risks which should result in lower costs. This is why a record of the insurance costs, a record of insurance experience for each facility as suggested above, and the accounting information should be complete and accurate.

Airports which are owned and operated by large cities may do well to consider some of the following means of handling their fire insurance program. Some cities of over 100,000 population have found it expedient to work out a program of partial insurance for fire and other losses. This type of program is feasible at airports having a record of low losses and a large number of varied risks. Essentially it consists of eliminating from the program all buildings which are good fire risks and insuring the remainder. This cuts down the over-all cost of insurance by eliminating many costly buildings of fire-proof construction. This program for the airport can well be coordinated with other insurance coverage within the municipality.

Some larger cities have found self-insurance to be a solution to their insurance costs.

In our very largest municipalities a policy of carrying no insurance is often in force. An airport in a municipality which follows such a

policy will probably be included in this program if it is not located too far from fire-fighting facilities. This program has been the result of discovering that losses over a period of years are less than the premium. This type of program is advocated only where certain conditions obtain, such as, buildings being widely scattered to prevent a general conflagration, a large number of risks, fire-proof construction in the most expensive risks, and an excellent fire-prevention, inspection, and fighting program in effect. It should be noted, however, that losses incurred under this program may often have to be met through special bond issues, and the debt-limit of a given community should be kept in mind when such a program is in force.

Many States provide a means of insuring for losses from fire and other causes through State-administered funds. This method often effects quite a saving to the municipal airport, so it behooves the airport manager to familiarize himself with the possibility and means of taking advantage of this method of insuring.

Another effective means of reducing insurance costs is to establish a policy of asking for bids from reputable insurance companies at the time insurance is contemplated. Many cities feel that they must spread their insurance business to many companies, but such a policy involves added expense. A city can request bids for the entire insurance coverage from only those reputable companies it desires to deal with. Combining the insurance program and competition will force the premium costs down. If this process is repeated at 3- or 5-year intervals, the business will ultimately be circulated to different firms.

It can be gathered from the above discussion that municipal functions, including airports, are frequently over-insured for this type of loss. This can be detected and borne out, as frequently stated, through accurate and complete records of all matters relative to insurance over the years to determine if premium costs are commensurate with the losses being paid.

Liability Insurance

Liability insurance covers the liability placed on an airport for damages because of injury. The injury may be the result of an accident taking place on airport properties or in connection with the operation of equipment owned, maintained, or used by the airport. It is the function of liability insurance to determine the liability for injury, the amount involved, and to adjust out of court if possible. If the case is brought to court, it is the function of liability insurance to defend the assured, pay judgments against him and all necessary expenses.

The most important problem in connection with liability insurance

is that of determining the actual liability itself. The question of liability involves determining whether a particular function performed on or by the airport is one which it can be held liable for and whether the airport itself is liable for the acts of its employees or agents.

The determination of liability is a matter which has been decided individually by the various States. No general rule can be laid down as to whether a particular function can be considered a liability of the airport. However, it might be stated that most States have recognized that municipalities and their departments are not to be held liable for injury caused by accidents resulting from the performance of a strictly municipal function. For example, accidents arising out of police or fire protection, or the collecting of refuse and garbage, are usually not considered the liability of a municipality inasmuch as these functions are strictly municipal in character.

This means, therefore, that in most instances those functions which are performed at an airport are not what are usually considered as municipal functions. Instead they are classified as corporate functions, and, being in this classification, the airport is usually held liable for damages from injuries caused by accidents taking place on their premises. In some instances, however, they would not be held responsible for accidents connected with certain equipment operated for routine airport functions, inasmuch as this may be classified as a municipal function. In this category would be placed accidents in connection with a city-owned vehicle used for fire protection at the airport, inasmuch as this would normally be considered a municipal function.

With this interpretation placed on the question of liability, airports are placed in a rather vulnerable spot in connection with most accidents that occur on their premises. For this reason it behooves the management to carry what he feels is adequate protection for accidents of this kind, being careful not to over-insure beyond the amount which would ordinarily be awarded in a damage case involving the airport.

Several factors may be brought out which will aid in reducing the cost of this insurance. As was recommended with respect to fire insurance, a complete and accurate record of insurance costs and experiences should be kept by the airport over a period of time. The initial expense of most liability insurance is, of necessity, relatively high, but through experience of low accident record it is possible to effect quite a saving in future year costs. The manager can substantiate any claims he may have for lower rates by means of whatever record he has made of his insurance experience.

With respect to an airport's accident record, it naturally follows

that extreme care in preventing accidents should ultimately work toward a reduction in insurance costs. The airport manager should learn to depend on this convenient means of preventing liability with respect to accidents resulting from flight activities. He should make frequent and wise use of the system of posting Notices to Airmen of any conditions on his field which could possibly cause an accident. This method of notifying the flying public of any unusual condition at a given airport is an excellent means of preventing accidents. In addition, further notices of these conditions can be posted on conspicuous bulletin boards where they will be seen by all pilots.

Visitors to the airport who are interested in watching the activities taking place at the airport are sometimes involved in accidents. In many instances these accidents can be prevented by means of adequate warning signs placed at conspicuous or dangerous spots. These signs should be clear as to their meaning, they should be posted in unobstructed spots and should be kept well painted and clean. In addition, the airport should be adequately supplied with fences to prevent the general public from entering areas which are conducive to accidents. At larger airports it may be necessary to keep the public from all areas where planes are located by means of fencing and a corps of guards. Preventive measures such as these will ultimately result in lowered insurance costs by aiding in producing a low accident record for the airport.

Liability insurance for vehicular equipment used by the airport should follow certain practices to achieve savings in the cost. Policies should be carried on just those airport vehicles which are used for corporate purposes; i. e., those purposes which are not strictly a municipal function. There is no need to carry liability insurance on those vehicles engaged in such functions as policing, fire protection, etc. Further savings may be accomplished by insuring airport vehicles as part of a municipal fleet of similar vehicles, whereby it is possible to secure a fleet rate on the insurance costs. In the event the airport manager uses his own automobile for airport purposes for which he receives an allowance, the airport need carry only a nonownership type of policy on this vehicle at a nominal rate.

Most of the suggestions made with reference to policies to be followed in planning the insurance program for losses from fire and other causes can be applied to the liability insurance program. If they are carefully adhered to, appreciable savings in the cost of this insurance will be effected.

Surety Bonds

In many instances it is considered advisable to carry surety bonds on certain airport employees. In smaller airports this is usually

confined to the manager himself, whereas in larger ones, especially where actual cash is handled, other employees are bonded. Surety bonds may be of two types—those for fidelity and those guaranteeing performance of duty. The former is the most usual type of surety bond used for airport employees.

The determination as to whether to bond certain airport employees is a policy for the individual airport, although in some instances the policy for this type of protection is determined by the city or State. The surety bond may be provided in a number of ways, either on the individual himself or on his position, or as a part of an over-all city schedule of persons and positions. The latter methods involve less cost for this protection.

The amount of the surety bond depends on the financial responsibility of the particular position involved. In those instances where actual funds are involved, the cost of this protection may be reduced by providing frequent and complete audits as well as by maintaining adequate and accurate accounting records.

INVITATION

The Civil Aeronautics Administration maintains, in each CAA Regional Office, qualified Airport Management and Operation Consultants who are available for consultations on airport management, operation, and maintenance problems. Airport owners or operators interested in this service should contact the Superintendent, Airports Branch, in the CAA Region in which the airport is located. For your convenience, the addresses of the Regional Offices are given below.

Regional Offices of the Civil Aeronautics Administration

Region 1: 385 Madison Avenue, New York 17, N. Y.
Region includes New York, Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, Pennsylvania, Delaware, Maryland, New Jersey, Virginia, and West Virginia.

Region 2: 84 Marietta Street NW., Atlanta 3, Ga.
Region includes Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, and Puerto Rico.

Region 3: Chicago Orchard Airport, Park Ridge, Ill.
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Region 4: P. O. Box 1689, Fort Worth 1, Tex.
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Region 5: 23d Floor, City Hall Building, Kansas City 6, Mo.
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Region 6: 5651 West Manchester Avenue, Los Angeles 45, Calif.
Region includes California, Arizona, Utah, and Nevada.

Region 7: CAA Building, Boeing Field, P. O. Box 3224, Seattle 14, Wash.
Region includes Idaho, Montana, Oregon, and Washington.

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Region includes Alaska.

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